

A NEW SPECIES OF LIZARD MITE AND A GENERIC KEY TO THE FAMILY PTERYGOSOMIDAE(ACARINA, ANYSTOIDEA)¹By JOHN A. DAVIDSON, *University of Maryland, College Park*

The family Pterygosomidae as now understood, is comprised of 8 genera. These are variable in general appearance and habitus. Most species are parasites of lizards while a few parasitize arthropods. Those forms found on lizards are usually baglike in appearance and dorso-ventrally flattened. Free living species are elongate and flattened. In the new species of *Geckobiella* here presented, the male is free living in form while the female is parasitic, having the body laterally compressed and shaped in such a way as to fit between scale bases beneath the host's scales (Fig. 3).

In an attempt to facilitate identification of pterygosomid species, Miss Margaret Grayson, Dr. F. Cunliffe, Dr. R. F. Lawrence, and Dr. E. W. Baker collaborated to produce the key found herein. Since several genera are represented by relatively few species, the discovery of new forms may necessitate changes in the key as well as in generic concepts.

***Geckobiella harrisi*, new species**

(Figs. 1-8)

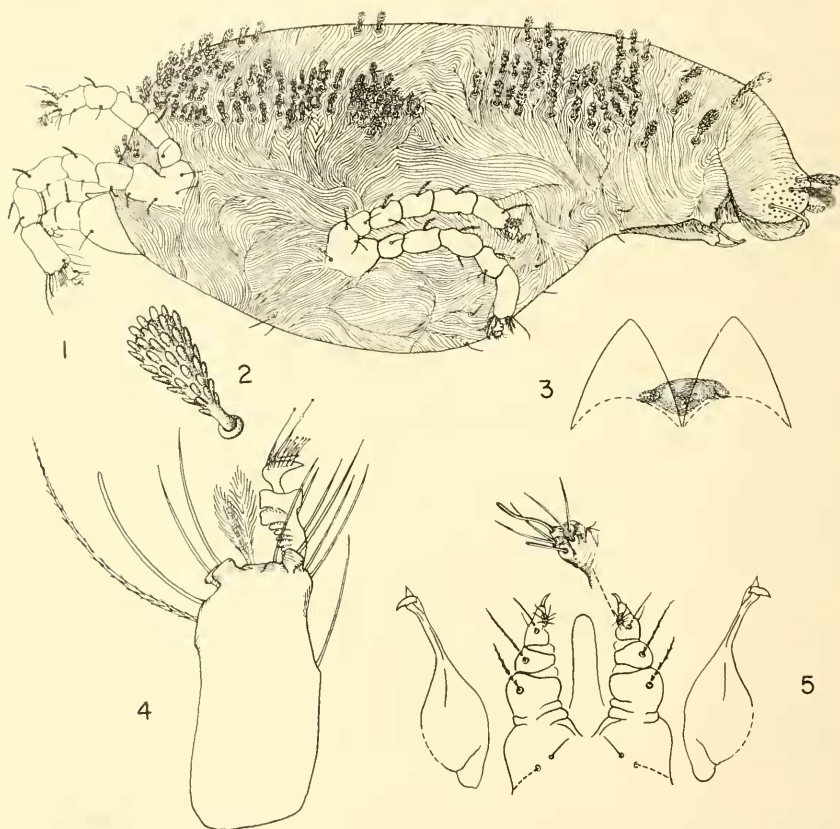
Diagnostic characters may be found in the laterally compressed body of the adult female; short clublike dorsal setae which occur in patches; short peritremes which in the female, do not extend to the second palpal segment, and the absence of eyes.

Adult female—Body longer than wide, distinctly laterally compressed and angular; clublike setae present in patches, especially numerous on the anterior dorso-lateral surface and becoming less abundant but larger posteriorly. Palpus 4-segmented with the tibia and tarsus fused; dorsum of segments 2, 3 and 4 each bearing a single long barbed seta, the second seta being longest; palpal thumb bearing 4 simple setae and 2 rodlike sensory setae; palpal tarsus with 1 lateral simple seta in addition to the dorsal barbed seta. Leg 1 somewhat longer than 2, 3, or 4, and with the last 3 segments distinctly enlarged; segments 3, 4, and 5, of all legs with 1 mildly pilose seta dorsally; duplex setae present on tarsus 1 and 2, consisting of a long whiplike barbed seta, and a shorter rodlike sensory seta. Abdomen prominently bilobed posteriorly; 2 pairs of large clublike setae and 1 large simple seta on each lobe; a ventral tubercle present anterior to each lobe, bearing a large seta which is medially pointed.

Adult male—Unlike the female, the male retains the free living form, being dorso-ventrally flattened; considerably smaller in size; tapering anteriorly and posteriorly. Clublike setae present on the margins of the dorsum are most abundant anteriorly. Palpus 4-segmented with the tibia and tarsus fused; segments 2-3 with dorsal barbed setae above; palpal tarsus with 3 simple setae above and 4 simple

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and 2 rodlike setae below on the palpal thumb; duplex setae present on legs 1-2 only. Aedeagus present (Fig. 7). Posterior end of the dorsum with a pair of tubercles, and a pair of subapical setae antero-ventral to the tubercles. Anterior to the subapical setae are a pair of genital papillae, bearing 3 setae each. Posterior end of the venter with a pair of seeming genital plates, each bearing a finely barbed lateral seta and lanceolate median seta.



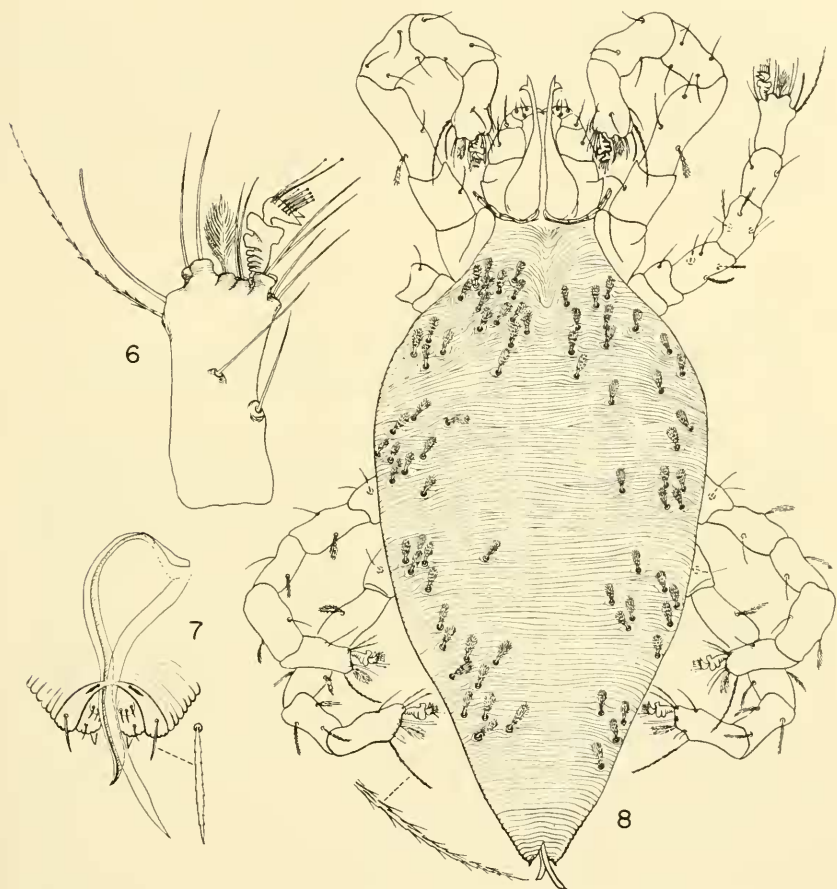
Geckobiella harrisi, n. sp.: fig. 1, Lateral view of adult female; fig. 2, Dorsal seta of female; fig. 3, Female in position on host (dotted lines indicate scale bases); fig. 4, Tarsus 1 of female; fig. 5, Ventral view of female mouthparts (enlargement shows palpal thumb).

Types—The holotype female, USNM No. 2365, and the allotype are deposited in the U. S. National Museum, Washington, D. C. Thirty-two female paratype specimens are deposited in the U. S. National Museum and the Institute of Acarology, University of Maryland, College Park, Md.

Type host—*Plica plica* (Linn.)

Type locality—12 miles south of Santarem, Para, Brazil.

Material examined—33 adult females and 1 adult male. No nymphs were found. All the material examined came from the ventral surface between the gular fold and the anal vent. The single iguanid host specimen was collected by Professor Lester E. Harris, Jr., in whose honor this mite is named.



Geckobiella harrisi, n. sp.: fig. 6, Tarsus I of male; fig. 7, Ventral view of male genital-anal region; fig. 8, Dorsal view of adult male.

Remarks—Banks (1905, p. 134) described the species *Geckobia texana*. Hirst (1917, p. 138) erected the genus *Geckobiella* using *Geckobia texana* as the type. This species was refigured by Hirst (1925, p. 200), Lawrence (1953, p. 16), and Lane (1954, p. 96). Until now the genus *Geckobiella* was mono-typic, and known to occur only on species of the iguanid genus *Sceloporous*.

Although the male and females here considered to be *G. harrisi* differ markedly in body form and shape, they appear to be the same species because they both have clublike dorsal setae occurring in patches, similar duplex setae, identical chaetotaxy of the palpal thumb, lack eyes, and were found associated on the same host. No other species of mites were found on the type host.

This species has been placed in the genus *Geckobiella* because it has dorsal setae which occur in patches, without indication of a transverse setal pattern; long, robust mouthparts; 1 dorsal seta present on palpal segments 2, 3, and 4, with the seta of palpal segment 3 being longest; leg 1 longer than the remaining legs; segments 2, 3, and 4 of all legs with 1 mildly pilose seta above; the body decidedly longer than wide. *G. harrisi* was found on an iguanid lizard as was the type species of the genus.

KEY TO THE GENERA OF PTERYGOSOMIDAE

1. Body decidedly longer than wide, coxae not fused, first two pairs of legs pointing anteriorly, last two pairs pointing posteriorly 2
 Body only slightly longer than wide, or as wide or wider than long, coxae I and II fused, coxae III and IV fused, all legs pointing anteriorly 4
2. Setae few, in transverse rows 3
 Setae numerous, not in transverse rows *Geckobiella* Hirst
3. Thirteen pairs of dorsal body setae, duplex setae of Tarsus I of unequal length, palpal thumb short; on arthropods *Pimeliaphilus* Tragardh
 Fourteen pairs of dorsal body setae, duplex setae of Tarsus I of equal length, palpal thumb elongate; on reptiles *Hirstiella* Berlese
4. Hypostome enlarged at apex, more or less parallel sided 5
 Hypostome not enlarged at apex, more or less parallel sided 6
5. Body usually as long as wide, skin leathery; size large *Ixodiderma* Lawrence
 Body much wider than long, skin soft and delicate; size small *Scaphothrix* Lawrence
6. Dorsal setae in two dense patches along the anterior part of lateral margins. Duplex setae of Tarsus I unequal. The anterior seta the shorter *Pterygosoma* Peters
 Dorsal setae not in two dense patches along the anterior part of lateral margins, duplex sensory setae not as above 7
7. Coxae armed with stout setae or spurs, duplex setae of Tarsus I unequal with the posterior seta the shorter *Geckobia* Megnin
 Coxae without spurs, duplex sensory setae of Tarsus I equal *Zonurobia* Lawrence

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A NOTE ON THE IDENTITY OF *NERTHRA PLANIFRONS* (MELIN)

(HEMIPTERA, GELASTOCORIDAE)

Nerthra planifrons (Melin), Zoologiska Bidrag Fran Uppsala, Band 12, p. 186, figs. 74-76, 1930 (prepublished, 1929), was one of the unrecognized species in my revision of the family, University of Kansas Science Bulletin, vol. 37, pt. 1, No. 11, 1955, pp. 277-475. The type, a unique female, is now before me through the courtesy of S. L. Tuxen, Universitetets Zoologiske Museum, København, Denmark.

The specimen is labeled "Type" and "Mexico, Parzudaki." The size is slightly different than that given in the original description. Length, 10.2 mm.; width of pronotum, 6.6 mm.; and width of abdomen, 7.1 mm. The apex of the head is provided with two minute tubercles which are scarcely larger than the granulations of the body and not visible from a dorsal view. The apex of the head does not project anteriorly. Because the head structure will not satisfy either part of couplet 39 of my key to the species of *Nerthra*, this specimen will run to either *N. lata* (Montandon) or to *N. amplicollis* (Stal) and *N. ecuadorensis* (Melin). All of these are very closely related to if not identical with *planifrons*. This specimen appears to differ from the females of the aforementioned species in that the pronotum is widest near the antero-lateral angle and the median portions of the lateral margins converge posteriorly. The two margins are not quite identical and it therefore is possible that the specimen is but an aberrant individual of one of the other species. There is a possibility that *planifrons* is the female of *N. ater* (Melin). In the absence of conclusive evidence to the contrary, the name *Nerthra planifrons* (Melin) should be retained for the present as representing a distinct species.—E. L. Todd, Falls Church, Virginia.